In the Claims

1-20 (canceled).

21 (new). A composition of matter comprising:

(a) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(b) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(c) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6);

(d) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted;

(e) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or substituted in the active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8;

(f) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted;

(g) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human

mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or substituted in the active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8;

(h) nucleic acid molecule comprising a DNA sequence encoding:

(i) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(ii) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6);

(iv) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted;

(v) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or

substituted in the active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8;

(vi) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted; or

(vii) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising

CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or substituted in the active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8; or

(i) a host cell comprising nucleic acid molecule encoding:

(i) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(ii) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6);

(iv) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine,

Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted;

(v) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or substituted in the active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8;

(vi) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to

Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted; or

(vii) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or substituted in the active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8.

22 (new). The composition of matter according to claim 21, wherein said other protein sequence of said CXCL8 antagonist comprises an amino acid sequence belonging to one or more of these protein sequences: extracellular domains of membrane-bound protein, immunoglobulin

constant region (Fc region), multimerization domains, signal peptides, export signal-containing proteins, and tag sequences.

23 (new). The composition of matter according to claim 21, wherein said CXCL8 antagonist is in the form of an active fraction, precursor, salt, derivative, conjugate or complex.

24 (new). The composition of matter according to claim 23, wherein said conjugate or complex is formed with a molecule chosen amongst radioactive labels, biotin, fluorescent labels, cytotoxic agents, or drug delivery agents.

25 (new). The composition of matter according to claim 21, wherein said nucleic acid molecule is an expression vector comprising a DNA sequence encoding a CXCL8 antagonist.

26 (new). The composition of matter according to claim 21, wherein said composition of matter comprises a CXCL8 antagonist and a pharmaceutically acceptable excipient.

27 (new). A process for the preparation of a CXCL8 antagonist comprising culturing a host cell comprising nucleic acid molecule encoding:

(i) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(ii) a CXCL8 antagonist comprising a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

(iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6);

(iv) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted;

(v) a CXCL8 antagonist comprising: (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or substituted in the active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8;

(vi) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted; or

(vii) a CXCL8 antagonist comprising an amino acid sequence belonging to a protein sequence other than human mature CXCL8 and (i) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; (ii) a mutant sequence of human mature CXCL8 polypeptide (SEQ ID NO: 2), wherein at least the two basic residues Lysine 64 and Lysine 67 of said polypeptide are substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine and a third basic residue is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine; or (iii) a CXCL8 antagonist comprising CXCL8-1B3 (SEQ ID NO: 4), or CXCL8-2B3 (SEQ ID NO: 6), wherein said antagonist is an active mutants in which one or more amino acids have been added, deleted, or substituted and the one or more amino acids that have been added, deleted, or substituted in the

active mutants belong to the first six amino acids in the amino-terminal domain of the mature human CXCL8;

and collecting the expressed proteins.

28 (new). The process for the preparation of pharmaceutical composition comprising combining a composition of matter according to claim 21 with a pharmaceutically acceptable carrier.

29 (new). A method for the treatment or prevention of a CXCL8-related disease comprising the administration of an effective amount of a composition of matter according to claim 21 to an individual.